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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,030	07/11/2003	Yumi Fujiwara	00684.003508	2709

5514 7590 07/02/2004

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EXAMINER

CHEN, SOPHIA S

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/617,030

Applicant(s)

FUJIWARA, YUMI

Examiner

Sophia S. Chen

Art Unit

2852

-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondenc address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,8,10-12 and 19 is/are rejected.
- 7) ☒ Claim(s) 2-7,9,13-18 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: 31c (page 32, line 5) and 22 (page 33, line 2, etc.). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
3. The disclosure is objected to because of the following informalities:
- a. Page 8, line 9, "2" should be "3".
  - b. Page 16, line 14, "3b" should be "3a".

- c. Page 17, line 21, "13b" should be "3b".
- d. Page 25, line 8, "7" should be "17".
- e. Page 27, line 20, "43d" should be "44d".
- f. Page 27, line 20, "3b" should be "40a".
- g. Page 30, line 15, "40d" should be "44d".
- h. Page 30, line 19, "40d" should be "44d".
- i. Page 31, line 3, "40d" should be "44d".
- j. Page 31, line 18, "46a" should be "40a".

Appropriate correction is required.

#### ***Claim Objections***

- 4. Claim 11 is objected to because of the following informality: Claim 11, line 2, "the transfer" should be "a transfer". Appropriate correction is required.
- 5. Claims 16-18 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 16 contains the same limitations as the ones in claim 5. Claims 17 and 18 are identical to claims 6 and 7, respectively.

#### ***Claim Rejections – 35 U.S.C. §103***

- 6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 8, 10, 11, 12, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi (US Pat. No. 6,453,143).

The patent discloses an image forming/belt moving apparatus comprising: an image bearing member (photosensitive drum) 10 or 601; a moving belt (a feeding belt) 9 or (intermediary transfer member) 605 (Figures 1, 5A, and 8); a supporting member (roller) 4 for supporting the belt 9, wherein the belt 9 has a first engaging portion (rib member – a projected portion) 2, and the supporting member has a second engaging portion (groove – a recessed portion) 4' (Figures 2 and 5B); and the belt 9 is regulated in a lateral shifting by engaging between the first engaging portion 2 and the second engaging portion 4'.

The first and second embodiment of the patent differs from the instant claimed invention in not disclosing a regulating member, disposed out of contact with the belt, for regulating movement of the first engaging portion.

The fourth embodiment of the patent discloses a fixing film (moving belt) 722 having a rib member (first engaging member) 702, and a hook (regulating member) 730 being disposed out of contact with the belt 722 (column 11, lines 52-59 and Figures 9A and 9B).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the regulating member as taught by the fourth embodiment

of the patent to the first engaging portion of the first or second embodiment of the patent to further regulate the belt.

***Allowable Subject Matter***

7. Claims 2-7, 9, 13-18, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Other Prior Art***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mitomi et al. (US Pat. No. 5,017,969) discloses an image forming apparatus comprising an image bearing member; a transfer belt having a rib member; a supporting roller having a groove portion; and the belt being regulated in a lateral shifting by engagement between the rib member and the groove portion.

Honda (US Pat. No. 6,053,307) discloses a belt moving apparatus comprising a moving belt having a first engaging portion; a supporting roller having a second engaging portion; and a regulating member, disposed in contact with the belt, for regulating movement of the first engaging portion.

Munenaka (US Pat. No. 6,097,922) discloses an image forming apparatus comprising an image bearing member; a transfer (or intermediate transfer) belt having a rib member; a supporting roller having a groove portion; and the belt being regulated in a lateral shifting by engagement between the rib member and the groove portion.

Hayakawa et al. (US Pat. Pub. No. US 2002/0021920 A1) discloses an image forming apparatus comprising an image bearing member; a transfer belt having a rib member; a supporting roller having a groove portion; and the belt being regulated in a lateral shifting by engagement between the rib member and the groove portion.

Wakana (US Pat. Pub. No. US 2002/0046932 A1) discloses a belt moving apparatus comprising a moving belt having a rib member; a supporting roller having a groove portion; the belt being regulated in a lateral shifting by engagement between the rib member and the groove portion; and a regulating member, disposed in contact with the belt, for regulating movement of the first engaging portion.

Sato et al. (US Pat. Pub. No. US 2003/0175056 A1) discloses a regulating roller being inclined.

Aoki (JP 02-157769) discloses an image forming apparatus comprising an image bearing member; a transfer belt having a rib member; a supporting roller having a groove portion; and the belt being regulated in a lateral shifting by engagement between the rib member and the groove portion.

Kodama (JP 09-114266) discloses an image forming apparatus comprising an image bearing member; a transfer belt having a rib member; a supporting roller having a groove portion; and the belt being regulated in a lateral shifting by engagement between the rib member and the groove portion.

Ito et al. (JP 09-169445) discloses an image forming apparatus comprising an image bearing member; a transfer belt having a rib member; a supporting roller having a groove portion; the belt being regulated in a lateral shifting by engagement between the

rib member and the groove portion; and a regulating member, disposed in contact with the belt, for regulating movement of the first engaging portion.

Enomoto (JP 10-254252) discloses an image forming apparatus comprising an image bearing member; an intermediate transfer belt having a rib member; a supporting roller having a groove portion; and the belt being regulated in a lateral shifting by engagement between the rib member and the groove portion.

Ichihara (JP 2000-075579) discloses an image forming apparatus comprising an image bearing member; an intermediate transfer belt having a rib member; a supporting roller having a groove portion; and the belt being regulated in a lateral shifting by engagement between the rib member and the groove portion.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (703) 308-7617. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (703) 308-1373. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sophia S. Chen  
Primary Examiner  
Art Unit 2852

Ssc  
June 28, 2004